IN THE SPECIFICATION

Please insert at page 1, before "BACKGROUND OF THE INVENTION," the following:

--This is a divisional application of Application No. 10/214,105, filed on August 8, 2002.--

Please amend the section starting at page 12, line 3 and ending at page 13, line 23, as follows.

--FIG. 15A is a schematic cross-sectional view for explaining the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention, FIG. 15B is a schematic cross-sectional view for explaining a step which follows the step of FIG. 15A of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention, FIG. 15C is a schematic cross-sectional view for explaining a step which follows the step of FIG. 15B of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention, and FIG. 15D is a schematic cross-sectional view for explaining a step which follows the step of FIG. 15C of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention;

FIG. 16A is a schematic cross-sectional view for explaining a step which follows the step of FIG. 15D of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention, FIG. 16B is a schematic cross-sectional view for

explaining a step which follows the step of FIG. 16A of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention, and FIG. 16C is a schematic cross-sectional view for explaining a step which follows the step of FIG. 16B of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention;

FIG. 17A is a schematic cross-sectional view for explaining a step which follows the step of FIG. 16C of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention, FIG. 17B is a schematic cross-sectional view for explaining a step which follows the step of FIG. 17A of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention, and FIG. 17C is a schematic cross-sectional view for explaining a step which follows the step of FIG. 17B of the method for manufacturing the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention;

FIG. 18 is a plan view for showing a nozzle section of the ink jet recording head according to the ~~third~~ fourth embodiment of the present invention;--

Please amend the section starting at page 28, line 9 and ending at page 31, line 13, as follows.

--FIG. 18 is a plan view of the nozzle portion of the above-mentioned ink jet recording head (FIG. 17C corresponds to a cross-sectional view taken along line 17C-17C of FIG. 18). The above-mentioned movable member 410 is formed ~~by~~ near projecting part 412' of a side wall of the nozzle channel 406 ~~by the~~ serving as a stopper (barrier) which can restrict the movable

member 410 from being displaced toward the ink inlet 405 in order to mostly ~~enclose~~ close a portion extending from the movable member 410 to the orifice when a bubble is generated over the surfaces of the heaters. Preferably this barrier is small in size in order ~~not~~ to interfere with the flowing of ink from the inlet toward the orifice as ~~much~~ little as possible when it is refilled. Furthermore, there is a minute gap that can be given by a photolithographic process ~~also~~ between the movable member and the nozzle wall. Preferably this gap is as small in size ~~as much~~ as possible ~~as far~~ so long as it permits the movable member to be displaced.

Furthermore, as in the case of an ink jet recording head shown in FIGS. 19A and 19B, not only by projecting part 512' of a side wall of a nozzle channel 506 ~~but also~~ and by forming between a movable member 510 and an ink inlet 505 as in the case of the present embodiment but also by forming a projecting barrier 513' on the substrate as in the case of the third embodiment, it is possible to further suppress the flowing of the ink toward the ink inlet 505 using a movable member 510 more effectively when a bubble is growing, further improving the discharge performance.

The following will briefly describe the operations of thus manufactured ink jet recording head (liquid discharge head) of the present invention with reference to FIGS. ~~20A and 20B~~ 20A, 20B, 21A and 21B.

First, as shown in FIG. 20A, an orifice channel extending from the heaters to the orifice and a nozzle 606 extending from the heaters to the ink inlet are combined to form an L-shape. In the nozzle, the movable member is arranged perpendicularly to a surface of the substrate provided with the heaters on the side of the nozzle. As shown in FIG. 20B, on the other hand, when a bubble 615 is generated by the heaters, a pressure wave occurs simultaneously and ink starts to flow, to

cause a movable member 610 to be inclined slightly toward an ink inlet 605, so that the nozzle is kept in a roughly ~~enclosed~~ closed state over a portion thereof from the orifice to the movable ~~member~~ member, by the movable member, a projecting barrier ~~613~~ 613' formed on the HB (substrate), and a ~~topper-shaped~~ stopper-shaped structure 612' formed behind the movable member. It is thus possible to focus the pressure over the heaters mostly on the side of the orifice in order to thereby fly ~~an~~ a discharged ink droplet ~~616~~ effectively. Note here that preferably a minute gap which is present between the movable member and a projecting barrier 613' is as small in size ~~as much~~ as possible in order to ~~give~~ provide the above-mentioned roughly ~~enclosed~~ closed state. Furthermore, there is another minute gap ~~also~~ between the movable member 610 and the side wall of the nozzle 606.

Now, as shown in FIG. 21A, since the nozzle is roughly ~~enclosed~~ closed by the movable member 610, the projecting barrier 613', and the stopper-shaped structure 612', the bubble grows larger toward the orifice to thereby enable flying the ink droplet ~~616~~ from the orifice in a more stable manner and more effectively. As shown in FIG. 21B, subsequently, when the bubble starts disappearing over the heaters, the movable member 610 starts to be displaced toward the orifice 607. Then, the movable member 610 is displaced greatly toward the orifice. In this case, a displacement of the movable member toward the orifice is larger than that thereof toward the ink inlet at the time of bubble growing. The ink is thus refilled speedily into a plurality of the ink nozzles 606 from the ink inlet 605. Note here that when the bubble is generated the ink is inhibited from flowing toward the inlet 605 ~~when the bubble is generated~~ by the movable member 610, the projecting barrier 613' formed on the HB (substrate) 601, and the stopper structure 612' formed behind the movable

member, so that the quantity of the ink refilled into the nozzles 606 can be reduced to a minimum nearly equal to the volume of the ink flown (discharged).--